

BIOL-ANTH 4660, Section 001
CRN:19953 & 20052
EVOLUTION OF HUMAN BEHAVIOR
SPRING 2020

INHERITANCE
HOMICIDE
MARRIAGE
CUSTOMS



SEXUAL JEALOUSY

INSTRUCTOR: DR. LISA RAPAPORT
TIME: Tues, Thurs 09:30 – 10:45AM
ROOM: 131 Brackett Hall
Office Hours: T/Th 11:00-12:30 and by appointment
Office: 321D Brackett Hall
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Required Reading:

Article pdf's provided in Canvas

(see also "Schedule" below)

Textbook:

Barrett L, Dunbar RI, Lycett J (2002) Human Evolutionary Psychology. Princeton: Princeton University Press. (available used starting at \$1.99 through Amazon.com and AbeBooks.com)

Suggested Reading:

See "Key Readings in Human Behavioral Ecology" file to be posted on Canvas midway through semester

CHEATING

SHARING



PARENTING
CHILD ABUSE



HUNTING

1. Course Description and Objectives:

Get ready for a course that may forever change the way you view your own behavior and the behavior of those around you. The underlying premise of this course is that human behavior, like our physiology and genetics, has been molded by the environmental and social forces in our evolutionary past. Thus, social constructs – such as concepts of fairness, generosity and attractiveness – have been shaped by natural selection. Furthermore, because evolution is an on-going process, your own behavioral predispositions may represent adaptive responses to modern environments. Although there are many ways to view human behavior, we will explore three complementary approaches:

- human behavioral ecology - examines how survival and reproductive success of individuals may vary according to the behavioral strategies they follow
- evolutionary psychology - examines how our psychological predispositions may act as mechanisms that support fitness-enhancing behavior

- dual inheritance theory – pursues the concept that human genetics and culture have evolved together and are inextricably intertwined

This course is a Critical Thinking Seminar and as such is designed to help you to develop critical thinking skills as part of the Clemson Thinks² (CT²) program. A primary goal of a critical thinking seminar is for you to gain a deeper understanding of how knowledge is constructed and to hone your ability to carefully evaluate the assumptions and logic underlying that knowledge. This is a different type of learning than that required to memorize facts and definitions, and to which you may not be as familiar or adept. Learning to assess the research and ideas of others (not to mention one's own work) with a discriminating eye is important, not only in science, but in order to be a discerning world citizen. It is a primary goal of the course. The course has been designed to encourage you to integrate information from multiple sources and to use critical reasoning to advocate for your own position. Please come with an open mind for the challenges of deep analysis and critical learning.

2. Learning Outcomes:

- Develop and hone the ability to ask good questions, identify underlying assumptions, recognize reliable and pertinent data, and to reason out answers
- Evaluate scientific hypotheses, especially those regarding the influence of natural selection in past and current environments on human behavior and behavioral predispositions
- Integrate ideas from multiple scholarly sources and effectively communicate your understanding of these concepts, both in writing and verbally
- Analyze and interpret historical and contemporary data regarding human behavioral adaptations and extrapolate to new situations in order to generate new questions

3. Course Format:

This course places a strong emphasis on active student participation in discussion. This means that students will play an important role in creating a class that is thought provoking and that supports a free exchange of ideas. It also means that all students are *required* to read the assigned articles *before* the first class of the week, and must be *prepared to discuss* them in class. Students will be called on and asked to demonstrate preparation for all discussions. Although showing up—on time—to class and taking notes is strongly advised, it will not count toward class-participation credit. Informed verbal participation is what comprises the “active class participation” portion of the grade.

I will post questions on article readings before each article is to be discussed. Use these questions to guide your reading, test your comprehension and formulate your own questions. We will use them during class to jumpstart our discussions. They will be graded on a scale of 0-5.

Lectures often will provide background and explanation of general theories, derived loosely from material in the textbook. In other words, the material in the textbook will serve as a springboard from which to dive into deeper analysis with other related information, such as that found in the required readings, other related studies, video, current events, etc. You may find yourself challenged to understand the lectures unless you read the assigned chapters in the textbook before coming to class, particularly if you haven't taken Behavioral Ecology.

Please understand: consistent class attendance, reading the assignments, and contributing to class discussion on a regular basis are *all* vital to a good grade.

Lecture Notes

Taking good notes will be vital to your success in the class, particularly since only a few lectures will be accompanied by PowerPoint slides. In order to encourage effective note-taking, I will post outlines of each lecture on Canvas before class. You may find them very useful to guide your notes of the lecture material.

4. Assessment Grading

Assessment	Percentage of Total
Discussion Questions checks (2% each of 10) =	20%
First Midterm =	10%
Second Midterm =	15%
Bibliography Exercise =	10%
Detailed Presentation Outline =	5%
Presentation + Summary =	20%
Active Class Participation =	20%

Exams

There will be two written exams. They will cover lectures, video, discussions, supplemental information and presentations. The second (final) exam will not be cumulative. Make-up exams will only be allowed in cases in which the student has a documented valid excuse *and* contacts me within 24hr before the exam *and* schedules a make-up no later than 4 days after exam. Exams will be open book and will consist primarily of essay questions but also may include fill-in-the-blank, short answer, and graphing.

First Midterm: Tuesday, March 3rd

Second Midterm: Wednesday, April 29th

Bibliography Exercise

Using the Internet to look up information, each student will explore two topics in human behavioral ecology. I will select one, the student the other. You may choose the same topic for this assignment as the one that most interests you for your presentation, as this will give you a head start on the literature search for your project. The primary goal of this assignment is to gain experience in searching out and selecting relevant scientific literature. Please note: another important goal of this exercise is to familiarize students with journal formatting requirements; therefore, points will be deducted for not following instructions and for using incorrect formatting. I will post detailed instructions on Canvas for this assignment.

Part 1: Topic and article selections. Due March 12th

Part 2: Web research and Formatted Articles, Due March 26th

Detailed Presentation Outline

You will submit a detailed outline of your presentation at least a week before your actual presentation. The outline should include all of your talk's major sections, which will depend on the format you choose for your talk. For example, if you are analyzing empirical data, your outline will have an introduction, methods, results and discussion, future directions and bibliography. If you have selected the in-depth literature review section, you will not need a general methods section; rather, each study you review will require a brief explanation of its methods.

Outline Assignment Due April 7th

Presentation

Each student will be required to give a 15-minute presentation of original material (i.e., not from a paper or present that has been written for another class and not just a regurgitation of information provided in lecture). Students are encouraged to use PowerPoint or Prezi for visual aids. The essential goal is to find information from multiple scientific sources and integrate them into a cohesive, well-organized presentation. Detailed guidelines are posted on Canvas. In general, though, the presentation must be in one of three formats:

1. Review of a Theoretical Topic

Provide a scholarly review of a topic, either one that was covered in class, or preferably, something new to the class. Either way, you must focus on information from articles that were not discussed in class.

2. Report of Empirical Data

Present your own data, or synthesize data from other sources, using the behavioral ecology/evolutionary psychology paradigms.

3. Analysis of Art, a Music Genre or Other Popular Media from an Adaptive Perspective

Interpret a literature, art, or music genre such as:

- Movie plotlines
- Plots, character types or interactions in a number of novels by a particular writer
- Plots and/or characters of folktales or ancient texts

Your analysis must be put in the context of key issues in human evolutionary ecology/psychology that we will have discussed in class (e.g., parental investment, kin selection, mating strategies, adaptive value of cultural norms, reciprocity, costly signaling, mate choice, etc.).

Written Summary of Presentation

A 2-page written summary (in 11 or 12 point font) of one's presentation must be submitted to me and handed out to the class *no later than the time of the presentation*.

The summary is basically an expanded abstract with references. We will discuss expectations for the presentation & summary in greater detail in class approximately mid-semester. Students are also encouraged to talk to me about potential topics while working on the bibliography assignment and well before the date of one's presentation. Do not leave work on the presentation until the last moment.

Please email your presentation material (such as the PowerPoint file – or the final outline for

any presentation without accompanying graphics) to me via email before your presentation.

Important Note Regarding Presentation

The preparation for and delivery of your presentation comprises a major part of your grade. Between the bibliography exercise, the outline, the presentation and summary, the project will comprise 35% of your grade. Expectations are high. It takes work and significant preparation to create a well-organized presentation. Give a hastily constructed presentation in which references are inadequately explained or – worse – missing, and it is very likely you will not be happy with your grade.

5. Classroom Etiquette:

- a. Please be seated *before* class begins and stay for the entire class period.
- b. When class is in session, do *not* use your electronic devices for anything other than taking notes; do not read anything not assigned for the course during class and do not sleep, disrupt the class verbally or physically, or engage in text messaging. Any time that you violate this rule, you will be subject to expulsion from the class for the day.
- c. Silence cell phone ringers and put phones away during class. If you need to be able to answer your phone during class due to an emergency or critical personal issue, please let me know before class begins for the day.
- d. Please wait 15 minutes should I be late for class.
- e. Help create a positive class atmosphere by being attentive and responsive to the instructor during lecture and by being polite and respectful during class discussions.
- f. If class should be cancelled for any reason, all readings/assignments/exams for both missed day(s) and the current day will be due on the day that classes resume.

SCHEDULE *

WEEK 1 (Jan 09):

Course Introduction and Overview and Introduction to Critical Thinking

Readings: none

WEEK 2 (Jan 14 & 16): **Evolutionary Approaches to Studying Behavior**

Sutherland J, Spiegelhalter D, Burgman MA (2013) Policy: Twenty tips for interpreting scientific claims. *Nature* 503: 335–337 DOI: [10.1038/503335a](https://doi.org/10.1038/503335a)

Bateson P, Laland KN (2013) Tinbergen's four questions: an appreciation and an update. *Trends in Ecology and Evolution* 28(12):712-718. <http://dx.doi.org/10.1016/j.tree.2013.09.013>

Text Chapter 1 (p. 1-14)

WEEK 3 (Jan 21 & 23): **Inclusive Fitness & Kin Selection**

Fox M *et al.* (2010) Grandma plays favourites: X-chromosome relatedness and sex-specific childhood mortality. *Proceedings of the Royal Society B* 277: 567-573 DOI: [10.1098/rspb.2009.1660](https://doi.org/10.1098/rspb.2009.1660)

Text Chapter 3

WEEK 4 (Jan 28 & 30): **Cooperative Breeding and the Evolution of Menopause**

Hrdy SB. (2016) Variable postpartum responsiveness among humans and other primates with

“cooperative breeding”: A comparative and evolutionary perspective. *Hormones and Behavior*, 77, 272–283. DOI:[10.1016/j.yhbeh.2015.10.016](https://doi.org/10.1016/j.yhbeh.2015.10.016)

Johnstone RA, Cant MA (2019) Evolution of menopause. *Current Biology* 29, R105–R119. Doi: <https://doi.org/10.10116/j.cub/2018.12.048>

WEEK 5 (Feb 04 & 06): **Altruism & Reciprocity** (Dr. Childress)

Tomasello M (2018) How we learned to put our fate in one another’s hands: The origins of morality. *Scientific American* 319(3):70-75. DOI: [10.1038/scientificamerican0918-70](https://doi.org/10.1038/scientificamerican0918-70)

Willer R, Sharkey A, Frey S (2012) Reciprocity on the hardwood: Passing patterns among professional basketball players. *PLOS One* 7:e49807 DOI:[10.1371/journal.pone.0049807](https://doi.org/10.1371/journal.pone.0049807)

Text Chapter 2 (p 22-33), Chapter 4

WEEK 6 (Feb 11 & 13): **Adaptation via Gene-Culture Interactions** (Dr. Ptacek)

O’Brian MJ & Laland KN (2012) Genes, culture and agriculture: an example of human niche construction. *Current Anthropology* 53: 434-470. DOI: [10.1086/666585](https://doi.org/10.1086/666585) [assigned pages exclude the commentaries]

Pagel M & Mace R (2004) The cultural wealth of nations. *Nature* 428-278.

WEEK 7 (Feb 18 & 20): **Sexual Selection & Mate Choice** (Dr. Ptacek)

Alvergne A, Lummaa V. (2009) Does the contraceptive pill alter mate choice in humans? *Trends in Ecology and Evolution* 25: 171-179 DOI: [10.1016/j.tree.2009.08.003](https://doi.org/10.1016/j.tree.2009.08.003).

Miller G, Tybur JM, Jordan BD (2007) Ovulatory cycle effects on tip earnings by lap dancers: Economic evidence for human estrus? *Evolution and Human Behavior* 28:375-381

Text Chapter 2 (p 37-44)

WEEK 8 (Feb 25 & 27): **Female Mating Strategies**

Scelza BA (2011) Female choice and extra-pair paternity in a traditional human population. *Biology Letters* 7: 889-891 DOI: [10.1098/rsbl.2011.0478](https://doi.org/10.1098/rsbl.2011.0478)

Larmuseau MHD, Matthijs K, Wenseleers T (2016) Cuckolded fathers rare in human populations. *Trends in Ecology and Evolution* 31:327-329. DOI: [10.1016/j.tree.2016.03.004](https://doi.org/10.1016/j.tree.2016.03.004)

Text Chapter 5

WEEK 9 (Mar 03 & 05): **Male Mating Strategies**

Smith EA, Bliege Bird R, Bird DW (2003) The benefits of costly signaling: Meriam turtle hunters. *Behavioral Ecology* 14: 116-126

Muller MN, Marlowe FW, Bugumba R, Ellison PT (2009) Testosterone and paternal care in East African foragers and pastoralists. *Proceedings of the Royal Society B* 276: 347-354. DOI: [10.1098/rspb.2008.1028](https://doi.org/10.1098/rspb.2008.1028)

Tuesday Midterm 1: open book & articles; no notes, no electronics

WEEK 10 (Mar 10 & 12): **Evolution of Human Life History Strategies**

Lawson DW, Alvergne A, Gibson MA (2012) The life-history trade-off between fertility and child survival. *Proceedings of the Royal Society, Series B* 279:4755–4764 DOI: [10.1098/rspb.2012.1635](https://doi.org/10.1098/rspb.2012.1635)

Nettle D (2010) Dying young and living fast: variation in life history across English neighborhoods. *Behavioral Ecology* 21:387-395 DOI: [10.1093/beheco/arp202](https://doi.org/10.1093/beheco/arp202)

Thurs: Part 1 of Bibliography exercise is due
Text Chapter 6

WEEK 11 (Mar 17 & 19):
***** Spring Break *****

WEEK 12 (Mar 24 & 26): **Parent-Offspring Conflict**

Cameron EZ, Dalerum F (2009) A Trivers-Willard effect in contemporary humans: Male-biased sex ratios among billionaires. *PLoS ONE* 4: e4195. DOI: [10.1371/journal.pone.0004195](https://doi.org/10.1371/journal.pone.0004195)

Tooley GA, Karakis M, Stokes M, Ozanne-Smith J (2006) Generalising the Cinderella Effect to unintentional childhood fatalities. *Evolution and Human Behavior* 27: 224-230. DOI: [10.1016/j.evolhumbehav.2005.10.001](https://doi.org/10.1016/j.evolhumbehav.2005.10.001)

Text Chapter 7
Thurs: Part 2 of Bibliography exercise is due

WEEK 13 (Mar 31 & April 02): **Language**

Smith D, et al. (2017) Cooperation and the evolution of hunter-gatherer storytelling. *Nature Communications* 18: 853 DOI: [10.1038/s41467-017-02036-8](https://doi.org/10.1038/s41467-017-02036-8)

Smith EO (2010) Communication and collective action: Language and the evolution of human cooperation. *Evolution and Human Behavior* 31:231-245 DOI: [10.1016/j.evolhumbehav.2010.03.001](https://doi.org/10.1016/j.evolhumbehav.2010.03.001)

Text Chapter 12 (p. 323-344)

WEEK 14 (Apr 07 & 09): **Gene-Culture Interactions**

Laland KN (2018) How we became a different kind of animal: an evolved uniqueness. *Scientific American* 319: 32-39. Doi: [10.1038/scientificamerican0918-32](https://doi.org/10.1038/scientificamerican0918-32)

Pringle H (2013) Long live the humans. *Scientific American* 309:48-55.

Tues: Outline is due

WEEK 15 (Apr 14 & 16): **Cultural Evolution** (continued)

Kempe M, Mesoudi A. (2014) Experimental and theoretical models of human cultural evolution. *WIREs Cognitive Science* 5:317–326. doi: [10.1002/wcs.1288](https://doi.org/10.1002/wcs.1288)

Text Chapter 13
Thurs: Presentations

WEEK 16 (Apr 21 & 23): **Presentations**

Readings: none

Final Exam: Wednesday, April 29, 8:00-10:30AM

** The schedule of topics is approximate. However, as long as you complete the readings by the dates on the schedule you will come to class prepared. Midterm exam, bibliography exercise and outline due dates are fixed. Students have the option of giving a presentation to the class or individually to the instructor. I reserve the right to modify the article reading assignments during the semester.

University Academic Integrity Policy

"As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a 'high seminary of learning'. Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form."

Academic dishonesty is defined as:

- Giving, receiving, or using unauthorized aid on any academic work;
- Plagiarism, which includes the intentional or unintentional copying of language, structure, or ideas of another and attributing the work to one's own efforts;
- Copying, editing, or deleting computer files that belong to another person or attempting to do so, or use of Computer Center account numbers that belong to another person without the permission of the file owner, account owner, or file number owner.

Clemson's **Office of Academic Integrity** provides extensive resources regarding academic integrity and can help you to comply with standards for avoiding plagiarism, giving credit where credit is due, etc.: <http://www.clemson.edu/academics/academic-integrity/integrityplagiarism.html>

Using work that you already have completed or are currently working on for another course or purpose is self-plagiarism. Assignments handed in to this course are to be done for this course only.

Students with Disabilities

Students with disabilities who need accommodations should make an appointment with me to discuss specific needs within the first month of classes. Students should present a Faculty Accommodation Letter from Student Disability Services when we meet. Student Disability Services is located in G-20 Redfern (telephone number: 656-6848; e-mail: sds-l@clemson.edu). Please be aware that accommodations are not retroactive and new Faculty Accommodation Letters must be presented each semester.

Title IX Policy

Clemson University is committed to creating and maintaining an environment that is free from sexual harassment. Clemson University's Title IX (Sexual Harassment) Policy is located at:

<http://www.clemson.edu/campus-life/campus-services/access/documents/policies/harassment.pdf>

Jerry Knighton serves as Clemson's Title IX coordinator.